

IN THE CLAIMS

Please replace all prior versions and claim listing with the following listing of claims.

Claim Listing:

1. (Currently Amended) A method of forming an optical device for insertion into the cornea of an eye, said method including the steps of:
 - a. providing a polymer film having first and second surfaces, suitable for insertion into the cornea of an eye;
 - b. forming tracks in said polymer film by exposing said polymer film to a first source of radiation;
 - c. etching said tracks to form at least some pores in said polymer film which connect said first and second surfaces;
 - d. providing a first mask; and
 - e. ~~forming surface relief in said polymer film by exposing through said mask portions of said polymer film to a second source of radiation~~ reducing the transmission of at least a first portion of said polymer film to at least certain wavelengths of light by exposing said first portion to a second source of radiation through said first mask.

2. (Previously Presented) The method of claim 1, wherein the step of forming said tracks with said first source of radiation is achieved by using a source of accelerated ions.
3. (Previously Presented) The method of claim 1, wherein the step of forming said tracks with said first source of radiation is achieved by using a source of x-rays.
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Currently Amended) The method of claim 45 [1], wherein said step of forming said surface relief with said second third source of radiation includes the step of forming producing within said polymer film a central disc and a concentric annulus of different thickness.
9. (Currently Amended) The method of claim 45 [1], wherein the step of forming said surface relief with said second third source of radiation includes the step of producing surface relief within said polymer film designed to correct for refractive error in an eye.
10. (Currently Amended) The method of claim 45 [1], wherein said second third source of radiation is selected from the group including optical lithography sources and ion beam sources.
11. (Cancelled)

12. (Cancelled)
13. (Cancelled)
14. (Cancelled)
15. (Currently Amended) The method of claim 8 [13], wherein said step of reducing transmission is accomplished achieved by the step of irradiating exposing said surrounding concentric annulus with ions from a third source of radiation to a source of accelerated ions to form a buried partly- to fully-opaque layer in said surrounding concentric annulus.
16. (Currently Amended) The method of claim 8 [13], wherein said step of reducing transmission is accomplished achieved by the step of forming within said surrounding concentric annulus a diffraction grating designed to reflect pre-selected wavelengths of light while transmitting other wavelengths.
17. (Cancelled)
18. (Cancelled)
19. (Cancelled)
20. (Cancelled)
21. (Cancelled)
22. (Cancelled)
23. (Cancelled)
24. (Cancelled)

25. (Cancelled)
26. (Cancelled)
27. (Cancelled)
28. (Cancelled)
29. (Cancelled)
30. (Cancelled)
31. (Cancelled)
32. (Cancelled)
33. (Cancelled)
34. (Currently Amended) The method of claim 45 [1], wherein said step of forming said surface relief with said second third source of radiation further includes the step of etching.
35. (Cancelled)
36. (Cancelled)
37. (Cancelled)
38. (Cancelled)
39. (Cancelled)
40. (Cancelled)
41. (Cancelled)

42. (Currently Amended) The method of claim 1 [41], wherein the said step of reducing said transmission of said first portion with said second source of radiation is achieved by using of said polymer film is accomplished by the step of irradiating said portion of said polymer film with ions from a third source of radiation accelerated ions to form a buried partly- to fully- opaque layer in said first portion of said polymer film.

43. (Cancelled)

44. (Cancelled)

45. (New) The method of claim 1, further including the steps of

- a. providing a second mask; and
- b. forming surface relief in said polymer film by exposing a second portion of said polymer film to a third source of radiation through said second mask.

46. (New) A method of forming an optical device for insertion into the cornea of an eye, said device including a central portion and a skirt portion, said method including the steps of:

- a. providing a polymer film having first and second surfaces; suitable for insertion into the cornea of an eye;
- b. forming tracks in said polymer film by exposing said polymer film to one source of radiation;
- c. etching said tracks to form at least some pores in said polymer film which connect said first and second surfaces; and

d. widening by etching at least some of said pores to dimensions large enough to permit the ingrowth of corneal tissue.

47. (New) The method of claim 46, wherein said step of widening at least some of said pores to dimensions large enough to permit the ingrowth of corneal tissue is restricted to said skirt portion.

48. (New) The method of claim 46, further including the step of forming surface relief in said polymer film by exposing portions of said polymer film to another source of radiation.

49. (New) A method of forming an optical device for insertion into the cornea of an eye, said method including the steps of:

- a. providing a polymer film having first and second surfaces, suitable for insertion into the cornea of an eye;
- b. forming tracks in said polymer film by exposing said polymer film to a first source of radiation;
- c. etching said tracks to form at least some pores in said polymer film which connect said first and second surfaces;
- d. providing a first and a second mask;
- e. reducing the transmission of at least a first portion of said polymer film to at least certain wavelengths of light by exposing said first portion to a second source of radiation through said first mask; and

- f. forming surface relief in said polymer film by exposing a second portion of said polymer film to a third source of radiation through said second mask.
50. (New) The method of claim 49, wherein the step of reducing said transmission with said second source of radiation is achieved by using a source of accelerated ions to form a buried partly- to fully-opaque layer in said first portion of said polymer film.
51. (New) A method of forming an optical device for insertion into an eye, said method including the steps of
 - a. providing a polymer film or lens;
 - b. providing a mask; and
 - c. reducing the transmission of at least a portion of said polymer film or lens to at least certain wavelengths of light by exposing said portion to a source of accelerated ions to form a buried partly- to fully-opaque layer in said portion of said polymer film or lens.